WorkKeys/MEAP/CTE - Michigan Academic Standards Crosswalk

This project was a collaborative effort between the Michigan Department of Labor & Economic Growth (formerly MDCD), Office of Career and Technical Preparation, and identified state level experts, professional organizations, and content area teachers, in response to requests from administrators and educators. Each crosswalk was developed to the Standards level of the Michigan Curriculum Frameworks. For further development, local district CTE programs will need to do benchmark level linkage with their local curriculum.

As we move forward in the educational process to prepare students for their future, we must recognize our responsibility to provide high quality technical and academic education to best prepare these students for their future goals.

Overview:

- This is a tool to assist Local Educational Agencies to develop crosswalks at the benchmark level for specific programs.
- CTE curriculum Standards /unit goals were the basis of the crosswalk
- Local district programs need to do benchmark level linkage with their local curriculum.
- Curriculum Standards support the curriculum, with a broad-based focus.
- WorkKeys crosswalks used national occupational job profile information as the basis of determining performance level expectations.
- For new program application submission starting 2003-2004, crosswalk at the benchmark level will be required.

Template use:

- For local implementation, we recommend that this file be downloaded and saved.
- In the left-hand column, enter the local program area standards.
- Next, review Curriculum Framework Content Standards, and electronically remove those that do not apply.
- Have a team of content experts review all local efforts. For accuracy, the team could include all instructors, curriculum coordinators, and administrators.
- For Benchmark information, local staff should go to the Michigan Department of Education website and review the MI Curriculum Framework document.

Benefits

- Provides linkages to National Occupational Standards for improvement in program delivery
- Will assist "highly qualified" instructional staff in documenting accountability and supporting new national initiatives
- Demonstrate CTE support of the Michigan Curriculum Frameworks and MEAP objectives
- To enable districts with CTE programs to strengthen communication with curriculum directors, superintendents and building administrators.
- Curriculum crosswalk will encourage communications between Career and Technical and academic educators
- Assist locals in establishing support for academic credit granted for Career and Technical Education programs

Plan Dissemination

- On MDCD/OCTP Web site
 - Posted by pathway
 - Link to Agriscience Web site
- State update meetings
- Presentation to Teacher groups
- Presentations to Administrator groups
- Distribution to Teacher Educators
- Feature item in Newsletters, updates to field
- MDE
- Available to Education Institutions

Program Content Standards	National Standards for	Work Keys	Michigan Career and Employability Skills	Michigan Technology Content Standards
	Program Area	Skills Level	Standards	
8.0 All students will integrate knowledge, skills, and practices required for careers in food production and services.	Trogram Area	Applied Mathematics: 3 4 5 6 7 Applied Technology 3 4 5 6 Listening and Writing: Listening 1 2 3 4 5 Locating Information 3 4 5 6 Observation 3 4 5 6 Reading for Information 3 4 5 6 7 Teamwork 3 4 5 6	1. All students will apply basic communication skills (reading, writing, speaking, and listening), apply scientific and social studies concepts, perform mathematical processes, and apply technology in work-related situations. 2. All students will acquire, organize, interpret, and evaluate information from career awareness and exploration activities, career assessment, and work-based experiences to identify and to pursue their career goals. 3. All student will demonstrate the ability to combine ideas or information in new ways, make connections between seemingly unrelated ideas, and organize and present information in formats such as symbols, pictures, schematics, charts, and graphs. 4. All students will make decisions and solve problems by specifying goals, identifying resources and constraints, generating alternatives, considering impact, choosing appropriate alternatives, implementing plans of action and evaluating results. 5. All students will display personal qualities such as responsibility, self-management, self-confidence, ethical behavior, and respect for self and others. 6. All students will identify organize, plan, and allocate resources (such as time, money, material, and human resources) efficiently and effectively. 7. All students will work cooperatively with people of diverse backgrounds and abilities, identify with the group's goals and values, learn to exercise leadership, tech others new skills, serve clients or customers, and will contribute to a group process with ideas, suggestions, and efforts. 8. All students will communicate ideas to support a position and negotiate to resolve divergent interests.	1. Use and transfer technological knowledge and skills for life roles (family member, citizen, worker, consumer, lifelong learner) 2. Use technologies to input, retrieve, organize manipulate, evaluate, and communicate information. 3. Apply appropriate technologies to critical thinking, creative, expression, and decision-making skills. 4. Employ a systematic approach to technological solutions by using resources and processes to create, maintain, and improve products, systems, and environments 5. Apply ethical and legal standards in planning, using, and evaluating technology. 6. Evaluate the societal and environmental impacts of technology and forecast alternative uses and possible consequences to make informed civic, social, and economic decisions.

Program Content Standards	National Standards for	Work Keys	Michigan Career and Employability Skills	Michigan Technology Content Standards
	Program Area	Skills Level	Standards	
		Listening and Writing:	9. All students will learn to understand, monitor,	
		Writing	and improve complex systems, including social,	
		1	technical, and mechanical systems, and work with	
		2	and maintain a variety of technologies.	
		3		
		4	10. All students will integrate employability skills	
		5	into behaviors, which prepare one for obtaining,	
			maintaining, advancing, and changing	
			employment.	

Program Content Standards	National Standards for	Work Keys	Michigan Career and Employability Skills	Michigan Technology Content Standards
	Program Area	Skills Level	Standards	
		Applied Mathematics:		
8.1 All students will analyze			All students will apply basic communication	Use and transfer technological
career paths within the food		3	skills (reading, writing, speaking, and listening),	knowledge and skills for life roles (family
production and food services		4	apply scientific and social studies concepts,	member, citizen, worker, consumer, lifelong
industries.		5	perform mathematical processes, and apply	learner)
		6	technology in work-related situations.	
		7		2. Use technologies to input, retrieve,
			2. All students will acquire, organize, interpret,	organize manipulate, evaluate, and
		Applied Technology	and evaluate information from career awareness	communicate information.
		3	and exploration activities, career assessment, and	
		4	work-based experiences to identify and to pursue	3. Apply appropriate technologies to
		5 6	their career goals.	critical thinking, creative, expression, and decision-making skills.
		0	3. All student will demonstrate the ability to	decision-making skins.
		Listening and Writing:	combine ideas or information in new ways, make	4. Employ a systematic approach to
		Listening	connections between seemingly unrelated ideas,	technological solutions by using resources
		1	and organize and present information in formats	and processes to create, maintain, and
		2	such as symbols, pictures, schematics, charts, and	improve products, systems, and
		3	graphs.	environments
		4		
		5	4. All students will make decisions and solve	5. Apply ethical and legal standards in
			problems by specifying goals, identifying	planning, using, and evaluating technology.
		Locating Information	resources and constraints, generating alternatives,	
		3	considering impact, choosing appropriate	
		4	alternatives, implementing plans of action and	6. Evaluate the societal and environmental
		5	evaluating results.	impacts of technology and forecast
		6		alternative uses and possible consequences
			5. All students will display personal qualities such	to make informed civic, social, and
			as responsibility, self-management, self-	economic decisions.
		Observation	confidence, ethical behavior, and respect for self	
		3	and others.	
		4		
		5	6. All students will identify organize, plan, and	
		6	allocate resources (such as time, money, material,	
		D I C I C I	and human resources) efficiently and effectively.	
		Reading for Information	7 411 4 1 4 111 1 41 1 14	
		3	7. All students will work cooperatively with people of diverse backgrounds and abilities, identify with	
		4 5	the group's goals and values, learn to exercise	
		6	leadership, tech others new skills, serve clients or	
		7	customers, and will contribute to a group process	
		'	with ideas, suggestions, and efforts.	
		Teamwork	with ideas, suggestions, and crioits.	
		3	8. All students will communicate ideas to support	
		4	a position and negotiate to resolve divergent	
		-		
		5 6	interests.	

Program Content Standards	National Standards for Program Area	Work Keys Skills Level	Michigan Career and Employability Skills Standards	Michigan Technology Content Standards
		Listening and Writing: Writing 1 2 3 4 5	9. All students will learn to understand, monitor, and improve complex systems, including social, technical, and mechanical systems, and work with and maintain a variety of technologies. 10. All students will integrate employability skills into behaviors, which prepare one for obtaining, maintaining, advancing, and changing employment.	

Program Content Standards	National Standards for	Work Keys	Michigan Career and Employability Skills	Michigan Technology Content Standards
	Program Area	Skills Level	Standards	
8.2 All students will demonstrate food safety and sanitation procedures.		Applied Mathematics: 3 4	All students will apply basic communication skills (reading, writing, speaking, and listening), apply scientific and social studies concepts, perform	Use and transfer technological knowledge and skills for life roles (family member, citizen, worker, consumer, lifelong)
, r		5 6 7	mathematical processes, and apply technology in work-related situations.	learner) 2. Use technologies to input, retrieve,
		Applied Technology	2. All students will acquire, organize, interpret, and evaluate information from career awareness and exploration activities, career assessment, and work-	organize manipulate, evaluate, and communicate information.
		4 5 6	based experiences to identify and to pursue their career goals.	3. Apply appropriate technologies to critical thinking, creative, expression, and decision-making skills.
		Listening and Writing: Listening 1 2 3 4	All student will demonstrate the ability to combine ideas or information in new ways, make connections between seemingly unrelated ideas, and organize and present information in formats such as symbols, pictures, schematics, charts, and graphs. All students will make decisions and solve	4. Employ a systematic approach to technological solutions by using resources and processes to create, maintain, and improve products, systems, and environments
		5 Locating Information	problems by specifying goals, identifying resources and constraints, generating alternatives, considering impact, choosing appropriate alternatives, implementing plans of action and evaluating results.	5. Apply ethical and legal standards in planning, using, and evaluating technology.
		4 5 6	5. All students will display personal qualities such as responsibility, self-management, self-confidence, ethical behavior, and respect for self and others.	6. Evaluate the societal and environmental impacts of technology and forecast alternative uses and possible consequences to make informed civic, social, and economic decisions.
		Observation 3 4	6. All students will identify organize, plan, and allocate resources (such as time, money, material, and human resources) efficiently and effectively.	
		5 6	7. All students will work cooperatively with people of diverse backgrounds and abilities, identify with	
		Reading for Information 3 4	the group's goals and values, learn to exercise leadership, tech others new skills, serve clients or customers, and will contribute to a group process	
		5 6 7	with ideas, suggestions, and efforts. 8. All students will communicate ideas to support a	
		Teamwork	position and negotiate to resolve divergent interests. 9. All students will learn to understand, monitor,	
		4 5 6	and improve complex systems, including social, technical, and mechanical systems, and work with and maintain a variety of technologies.	

Program Content Standards	National Standards for Program Area	Work Keys Skills Level	Michigan Career and Employability Skills Standards	Michigan Technology Content Standards
		Listening and Writing: Writing 1 2 3 4 5	10. All students will integrate employability skills into behaviors, which prepare one for obtaining, maintaining, advancing, and changing employment.	

Program Content Standards	National Standards for	Work Keys	Michigan Career and Employability Skills	Michigan Technology Content Standards
	Program Area	Skills Level	Standards	
		Applied Mathematics:		
8.3 All students will			1. All students will apply basic communication	Use and transfer technological
demonstrate selecting, using, and		3	skills (reading, writing, speaking, and listening),	knowledge and skills for life roles (family
maintaining food production		4	apply scientific and social studies concepts,	member, citizen, worker, consumer, lifelong
equipment.		5	perform mathematical processes, and apply	learner)
		6	technology in work-related situations.	
		7		2. Use technologies to input, retrieve,
			2. All students will acquire, organize, interpret,	organize manipulate, evaluate, and
		Applied Technology	and evaluate information from career awareness	communicate information.
		3	and exploration activities, career assessment, and	
		4	work-based experiences to identify and to pursue	3. Apply appropriate technologies to
		5	their career goals.	critical thinking, creative, expression, and
		6		decision-making skills.
			3. All student will demonstrate the ability to	
		Listening and Writing:	combine ideas or information in new ways, make	4. Employ a systematic approach to
		Listening	connections between seemingly unrelated ideas,	technological solutions by using resources
		1	and organize and present information in formats	and processes to create, maintain, and
		2	such as symbols, pictures, schematics, charts, and	improve products, systems, and
		3	graphs.	environments
		4		
		5	4. All students will make decisions and solve	5. Apply ethical and legal standards in
			problems by specifying goals, identifying	planning, using, and evaluating technology.
		Locating Information	resources and constraints, generating alternatives,	
		3	considering impact, choosing appropriate	
		4	alternatives, implementing plans of action and	6. Evaluate the societal and environmental
		5	evaluating results.	impacts of technology and forecast
		6	6 40 4 1 4 20 11 1 1 12	alternative uses and possible consequences
			5. All students will display personal qualities	to make informed civic, social, and
		01	such as responsibility, self-management, self-	economic decisions.
		Observation	confidence, ethical behavior, and respect for self	
		3	and others.	
		4	C All (1 () III () C () 1 1 1	
		5 6	6. All students will identify organize, plan, and	
		в	allocate resources (such as time, money, material,	
		Reading for Information	and human resources) efficiently and effectively.	
		3	7. All students will work cooperatively with	
		4	people of diverse backgrounds and abilities,	
		5	identify with the group's goals and values, learn	
		6	to exercise leadership, tech others new skills,	
		7	serve clients or customers, and will contribute to	
		'	a group process with ideas, suggestions, and	
		Teamwork	efforts.	
			CHOIG.	
		$\begin{bmatrix} 3 \\ 4 \end{bmatrix}$	8. All students will communicate ideas to	
		5	support a position and negotiate to resolve	
		6		
		U	divergent interests.	

Program Content Standards	National Standards for Program Area	Work Keys Skills Level	Michigan Career and Employability Skills Standards	Michigan Technology Content Standards
		Listening and Writing: Writing 1 2 3 4 5	9. All students will learn to understand, monitor, and improve complex systems, including social, technical, and mechanical systems, and work with and maintain a variety of technologies. 10. All students will integrate employability skills into behaviors, which prepare one for obtaining, maintaining, advancing, and changing employment.	

Program Content Standards	National Standards for	Work Keys	Michigan Career and Employability Skills	Michigan Technology Content
	Program Area	Skills Level	Standards	Standards
		Applied Mathematics:		
8.4 All students will			1. All students will apply basic communication	Use and transfer technological
demonstrate planning menu		3	skills (reading, writing, speaking, and listening),	knowledge and skills for life roles
items based on standardized		4	apply scientific and social studies concepts, perform	(family member, citizen, worker,
recipes to meet customer needs.		5	mathematical processes, and apply technology in	consumer, lifelong learner)
_		6	work-related situations.	
		7		2. Use technologies to input, retrieve,
			2. All students will acquire, organize, interpret, and	organize manipulate, evaluate, and
		Applied Technology	evaluate information from career awareness and	communicate information.
		3	exploration activities, career assessment, and work-	
		4	based experiences to identify and to pursue their	3. Apply appropriate technologies to
		5	career goals.	critical thinking, creative, expression,
		6	e e e e e e e e e e e e e e e e e e e	and decision-making skills.
			3. All student will demonstrate the ability to	
		Listening and Writing:	combine ideas or information in new ways, make	4. Employ a systematic approach to
		Listening	connections between seemingly unrelated ideas, and	technological solutions by using
		1	organize and present information in formats such as	resources and processes to create,
		2	symbols, pictures, schematics, charts, and graphs.	maintain, and improve products, systems,
		3		and environments
		4	4. All students will make decisions and solve	
		5	problems by specifying goals, identifying resources	5. Apply ethical and legal standards in
			and constraints, generating alternatives, considering	planning, using, and evaluating
		Locating Information	impact, choosing appropriate alternatives,	technology.
		3	implementing plans of action and evaluating results.	
		4		
		5	5. All students will display personal qualities such	6. Evaluate the societal and
		6	as responsibility, self-management, self-confidence,	environmental impacts of technology and
			ethical behavior, and respect for self and others.	forecast alternative uses and possible
		Observation	, 1	consequences to make informed civic,
		3	6. All students will identify organize, plan, and	social, and economic decisions.
		4	allocate resources (such as time, money, material,	
		5	and human resources) efficiently and effectively.	
		6		
			7. All students will work cooperatively with people	
		Reading for Information	of diverse backgrounds and abilities, identify with	
		3	the group's goals and values, learn to exercise	
		4	leadership, tech others new skills, serve clients or	
		5	customers, and will contribute to a group process	
		6	with ideas, suggestions, and efforts.	
		7	, 55	
			8. All students will communicate ideas to support a	
		Teamwork	position and negotiate to resolve divergent interests.	
		3	1	
		4	9. All students will learn to understand, monitor,	
		5	and improve complex systems, including social,	
		6	technical, and mechanical systems, and work with	
			and maintain a variety of technologies.	

Program Content Standards	National Standards for Program Area	Work Keys Skills Level	Michigan Career and Employability Skills Standards	Michigan Technology Content Standards
	110gram Arca		Standards	Standards
		Listening and Writing:		
		Writing	10. All students will integrate employability skills	
		1	into behaviors, which prepare one for obtaining,	
		2	maintaining, advancing, and changing employment.	
		3		
		4		
		5		

Program Content Standards	National Standards for	Work Keys	Michigan Career and Employability Skills	Michigan Technology Content
	Program Area	Skills Level	Standards	Standards
		Applied Mathematics:		
8.5 All students will			1. All students will apply basic communication skills	Use and transfer technological
demonstrate commercial		3	(reading, writing, speaking, and listening), apply	knowledge and skills for life roles (family
preparation for all menu		4	scientific and social studies concepts, perform	member, citizen, worker, consumer,
categories to produce a variety of		5	mathematical processes, and apply technology in	lifelong learner)
food products.		6 7	work-related situations.	2 H 4h1i 4- i4
		/	2. All students will acquire, organize, interpret, and	2. Use technologies to input, retrieve, organize manipulate, evaluate, and
		Applied Technology	evaluate information from career awareness and	communicate information.
		3	exploration activities, career assessment, and work-	communicate information.
		4	based experiences to identify and to pursue their	3. Apply appropriate technologies to
		5	career goals.	critical thinking, creative, expression, and
		6		decision-making skills.
			3. All student will demonstrate the ability to combine	
		Listening and Writing:	ideas or information in new ways, make connections	4. Employ a systematic approach to
		Listening	between seemingly unrelated ideas, and organize and	technological solutions by using resources
		1	present information in formats such as symbols,	and processes to create, maintain, and
		2	pictures, schematics, charts, and graphs.	improve products, systems, and
		3	4 40 4 1 4 20 1 1 1 1 1	environments
		4 5	4. All students will make decisions and solve problems by specifying goals, identifying resources	5. Apply ethical and legal standards in
		3	and constraints, generating alternatives, considering	planning, using, and evaluating
		Locating Information	impact, choosing appropriate alternatives,	technology.
		3	implementing plans of action and evaluating results.	teemology.
		4	impromerning plans of action and evaluating results.	
		5	5. All students will display personal qualities such as	6. Evaluate the societal and
		6	responsibility, self-management, self-confidence,	environmental impacts of technology and
			ethical behavior, and respect for self and others.	forecast alternative uses and possible
				consequences to make informed civic,
		Observation	6. All students will identify organize, plan, and	social, and economic decisions.
		3	allocate resources (such as time, money, material, and	
		4 5	human resources) efficiently and effectively.	
		6	7. All students will work cooperatively with people of	
			diverse backgrounds and abilities, identify with the	
		Reading for Information	group's goals and values, learn to exercise leadership,	
		3	tech others new skills, serve clients or customers, and	
		4	will contribute to a group process with ideas,	
		5	suggestions, and efforts.	
		6		
		7	8. All students will communicate ideas to support a	
			position and negotiate to resolve divergent interests.	
		Teamwork		
		3	9. All students will learn to understand, monitor, and	
I		4 5	improve complex systems, including social, technical, and mechanical systems, and work with and maintain	
		6	and mechanical systems, and work with and maintain a variety of technologies.	
		U	a variety of technologies.	

Program Content Standards	National Standards for	Work Keys	Michigan Career and Employability Skills	Michigan Technology Content
	Program Area	Skills Level	Standards	Standards
		Listening and Writing: Writing 1 2 3 4 5	10. All students will integrate employability skills into behaviors, which prepare one for obtaining, maintaining, advancing, and changing employment.	

Program Content Standards	National Standards for	Work Keys	Michigan Career and Employability Skills	Michigan Technology Content
	Program Area	Skills Level	Standards	Standards
0.6 411 4 1 4 211		Applied Mathematics:	1 41 4 1 4 21 1 1 1 2 2 2 1 21	
8.6 All students will			1. All students will apply basic communication skills	1. Use and transfer technological
demonstrate implementation of		3	(reading, writing, speaking, and listening), apply	knowledge and skills for life roles (family
food service management		4	scientific and social studies concepts, perform	member, citizen, worker, consumer,
functions.		5	mathematical processes, and apply technology in	lifelong learner)
		6 7	work-related situations.	
		/	2 411	2. Use technologies to input, retrieve,
		Applied Technology	All students will acquire, organize, interpret, and evaluate information from career awareness and	organize manipulate, evaluate, and communicate information.
		Applied Technology	exploration activities, career assessment, and work-	communicate information.
		4	based experiences to identify and to pursue their	3. Apply appropriate technologies to
		5	career goals.	critical thinking, creative, expression, and
		6	career goars.	decision-making skills.
		0	2. All student will demonstrate the chility to combine	decision-making skins.
		Listening and Writing:	3. All student will demonstrate the ability to combine ideas or information in new ways, make connections	4. Employ a systematic approach to
		Listening and writing. Listening	between seemingly unrelated ideas, and organize and	technological solutions by using resources
		1	present information in formats such as symbols,	and processes to create, maintain, and
		2	pictures, schematics, charts, and graphs.	improve products, systems, and
		3	pictures, schematics, charts, and graphs.	environments
		4	4. All students will make decisions and solve	Cirvironnicites
		5	problems by specifying goals, identifying resources	5. Apply ethical and legal standards in
			and constraints, generating alternatives, considering	planning, using, and evaluating
		Locating Information	impact, choosing appropriate alternatives,	technology.
		3	implementing plans of action and evaluating results.	teemology.
		4	impromenting plans of action and cyalauting results.	
		5	5. All students will display personal qualities such as	6. Evaluate the societal and
		6	responsibility, self-management, self-confidence,	environmental impacts of technology and
			ethical behavior, and respect for self and others.	forecast alternative uses and possible
			, 1	consequences to make informed civic,
		Observation	6. All students will identify organize, plan, and	social, and economic decisions.
		3	allocate resources (such as time, money, material, and	
		4	human resources) efficiently and effectively.	
		5		
		6	7. All students will work cooperatively with people of	
			diverse backgrounds and abilities, identify with the	
		Reading for Information	group's goals and values, learn to exercise leadership,	
		3	tech others new skills, serve clients or customers, and	
		4	will contribute to a group process with ideas,	
		5	suggestions, and efforts.	
		6		
		7	8. All students will communicate ideas to support a	
		l	position and negotiate to resolve divergent interests.	
		Teamwork	<u> </u>	
		3	9. All students will learn to understand, monitor, and	
		4	improve complex systems, including social, technical,	
		5	and mechanical systems, and work with and maintain	
		6	a variety of technologies.	

Program Content Standards	National Standards for	Work Keys	Michigan Career and Employability Skills	Michigan Technology Content
	Program Area	Skills Level	Standards	Standards
		Listening and Writing: Writing 1 2 3 4 5	10. All students will integrate employability skills into behaviors, which prepare one for obtaining, maintaining, advancing, and changing employment.	

Program Content Standards	National Standards for	Work Keys	Michigan Career and Employability Skills	Michigan Technology Content Standards
	Program Area	Skills Level	Standards	
		Applied Mathematics:		
8.7 All students will			1. All students will apply basic communication	Use and transfer technological knowledge and
demonstrate the concept of		3	skills (reading, writing, speaking, and listening),	skills for life roles (family member, citizen, worker,
internal and external customer		4	apply scientific and social studies concepts,	consumer, lifelong learner)
service.		5	perform mathematical processes, and apply	
		6	technology in work-related situations.	2. Use technologies to input, retrieve, organize
		7		manipulate, evaluate, and communicate information.
			2. All students will acquire, organize, interpret,	
		Applied Technology	and evaluate information from career awareness	3. Apply appropriate technologies to critical
		3	and exploration activities, career assessment, and	thinking, creative, expression, and decision-making
		4	work-based experiences to identify and to pursue	skills.
		5	their career goals.	
		6		4. Employ a systematic approach to technological
			3. All student will demonstrate the ability to	solutions by using resources and processes to create,
		Listening and Writing:	combine ideas or information in new ways,	maintain, and improve products, systems, and
		Listening	make connections between seemingly unrelated	environments
		1	ideas, and organize and present information in	
		2	formats such as symbols, pictures, schematics,	Apply ethical and legal standards in planning,
		3	charts, and graphs.	using, and evaluating technology.
		4		
		5	4. All students will make decisions and solve	
			problems by specifying goals, identifying	6. Evaluate the societal and environmental impacts
		Locating Information	resources and constraints, generating	of technology and forecast alternative uses and
		3	alternatives, considering impact, choosing	possible consequences to make informed civic,
		4	appropriate alternatives, implementing plans of	social, and economic decisions.
		5	action and evaluating results.	
		6		
			5. All students will display personal qualities	
		Observation	such as responsibility, self-management, self-	
		3	confidence, ethical behavior, and respect for self	
		4	and others.	
		5		
		6	6. All students will identify organize, plan, and	
		D I C Y C Y	allocate resources (such as time, money,	
		Reading for Information	material, and human resources) efficiently and	
		3	effectively.	
		4 5	7 411	
		*	7. All students will work cooperatively with	
		6 7	people of diverse backgrounds and abilities,	
		′	identify with the group's goals and values, learn to exercise leadership, tech others new skills,	
		Teamwork		
1		1 eamwork	serve clients or customers, and will contribute to	
		*	a group process with ideas, suggestions, and efforts.	
		4 5	CHOILS.	
		6	8. All students will communicate ideas to	
		U U		
	1		support a position and negotiate to resolve	

Program Content Standards	National Standards for Program Area	Work Keys Skills Level	Michigan Career and Employability Skills Standards	Michigan Technology Content Standards
		Listening and Writing: Writing 1 2 3 4 5	divergent interests. 9. All students will learn to understand, monitor, and improve complex systems, including social, technical, and mechanical systems, and work with and maintain a variety of technologies. 10. All students will integrate employability skills into behaviors, which prepare one for obtaining, maintaining, advancing, and changing employment.	

Program Content Standards	National Standards for	Work Keys	Michigan Career and Employability Skills	Michigan Technology Content
	Program Area	Skills Level	Standards	Standards
		Applied Mathematics:		
10.0 All students will			1. All students will apply basic communication	Use and transfer technological
integrate knowledge, skills, and		3	skills (reading, writing, speaking, and listening),	knowledge and skills for life roles (family
practice required for careers in		4	apply scientific and social studies concepts,	member, citizen, worker, consumer,
hospitality, tourism, and		5 6	perform mathematical processes, and apply	lifelong learner)
recreation.		7	technology in work-related situations.	2. Use technologies to imput metricus
		/	2. All students will acquire, organize, interpret,	2. Use technologies to input, retrieve, organize manipulate, evaluate, and
		Applied Technology	and evaluate information from career awareness	communicate information.
ı		3	and exploration activities, career assessment, and	communicate information.
		4	work-based experiences to identify and to pursue	3. Apply appropriate technologies to
		5	their career goals.	critical thinking, creative, expression, and
		6	8	decision-making skills.
			3. All student will demonstrate the ability to	
		Listening and Writing:	combine ideas or information in new ways, make	4. Employ a systematic approach to
		Listening	connections between seemingly unrelated ideas,	technological solutions by using resources
		1	and organize and present information in formats	and processes to create, maintain, and
		2	such as symbols, pictures, schematics, charts, and	improve products, systems, and
		3	graphs.	environments
		4	4 49 4 1 4 29 1 1 1 1 1	
		5	4. All students will make decisions and solve	5. Apply ethical and legal standards in
		Locating Information	problems by specifying goals, identifying resources and constraints, generating alternatives,	planning, using, and evaluating technology.
		3	considering impact, choosing appropriate	technology.
		4	alternatives, implementing plans of action and	
		5	evaluating results.	6. Evaluate the societal and
		6	evaluating results.	environmental impacts of technology and
			5. All students will display personal qualities such	forecast alternative uses and possible
			as responsibility, self-management, self-	consequences to make informed civic,
		Observation	confidence, ethical behavior, and respect for self	social, and economic decisions.
		3	and others.	
		4		
		5	6. All students will identify organize, plan, and	
ı		6	allocate resources (such as time, money, material,	
ı		D II C I C I	and human resources) efficiently and effectively.	
I		Reading for Information	7 All	
		3 4	7. All students will work cooperatively with people of diverse backgrounds and abilities, identify with	
1		5	the group's goals and values, learn to exercise	
		6	leadership, tech others new skills, serve clients or	
ı		7	customers, and will contribute to a group process	
		1	with ideas, suggestions, and efforts.	
I		Teamwork	, and and an	
		3	8. All students will communicate ideas to support	
ı		4	a position and negotiate to resolve divergent	
I		5	interests.	
ĺ		6		

Program Content Standards	National Standards for	Work Keys	Michigan Career and Employability Skills	Michigan Technology Content
	Program Area	Skills Level	Standards	Standards
			9. All students will learn to understand, monitor,	
		Listening and Writing:	and improve complex systems, including social,	
		Writing	technical, and mechanical systems, and work with	
		1	and maintain a variety of technologies.	
		2		
		3	10. All students will integrate employability skills	
		4	into behaviors, which prepare one for obtaining,	
		5	maintaining, advancing, and changing	
			employment.	

Program Content Standards	National Standards for	Work Keys	Michigan Career and Employability Skills	Michigan Technology Content
	Program Area	Skills Level	Standards Standards	Standards
		Applied Mathematics:		
10.1 All students will analyze			1. All students will apply basic communication	Use and transfer technological
career paths within the		3	skills (reading, writing, speaking, and listening),	knowledge and skills for life roles (family
hospitality, tourism, and		4	apply scientific and social studies concepts,	member, citizen, worker, consumer,
recreation industries.		5	perform mathematical processes, and apply	lifelong learner)
		6	technology in work-related situations.	
		7		2. Use technologies to input, retrieve,
			2. All students will acquire, organize, interpret,	organize manipulate, evaluate, and
		Applied Technology	and evaluate information from career awareness	communicate information.
		3	and exploration activities, career assessment, and	2 4 1 1 1 1 1
		4 5	work-based experiences to identify and to pursue	3. Apply appropriate technologies to
		5	their career goals.	critical thinking, creative, expression, and
		0	3. All student will demonstrate the ability to	decision-making skills.
		Listening and Writing:	combine ideas or information in new ways, make	4. Employ a systematic approach to
		Listening and writing.	connections between seemingly unrelated ideas,	technological solutions by using resources
		1	and organize and present information in formats	and processes to create, maintain, and
		2	such as symbols, pictures, schematics, charts, and	improve products, systems, and
		3	graphs.	environments
		4		
		5	4. All students will make decisions and solve	5. Apply ethical and legal standards in
			problems by specifying goals, identifying	planning, using, and evaluating
		Locating Information	resources and constraints, generating alternatives,	technology.
		3	considering impact, choosing appropriate	
		4	alternatives, implementing plans of action and	
		5	evaluating results.	6. Evaluate the societal and
		6		environmental impacts of technology and
			5. All students will display personal qualities such	forecast alternative uses and possible
		Observation	as responsibility, self-management, self- confidence, ethical behavior, and respect for self	consequences to make informed civic,
			and others.	social, and economic decisions.
		$\begin{bmatrix} 3 \\ 4 \end{bmatrix}$	and others.	
		5	6. All students will identify organize, plan, and	
		6	allocate resources (such as time, money, material,	
			and human resources) efficiently and effectively.	
		Reading for Information	and numerical societies of the control of the contr	
		3	7. All students will work cooperatively with people	
		4	of diverse backgrounds and abilities, identify with	
		5	the group's goals and values, learn to exercise	
		6	leadership, tech others new skills, serve clients or	
		7	customers, and will contribute to a group process	
			with ideas, suggestions, and efforts.	
		Teamwork		
		3	8. All students will communicate ideas to support	
		4	a position and negotiate to resolve divergent	
		5	interests.	
		6		

Program Content Standards	National Standards for	Work Keys	Michigan Career and Employability Skills	Michigan Technology Content
	Program Area	Skills Level	Standards	Standards
		Listening and Writing: Writing 1 2 3 4 5	9. All students will learn to understand, monitor, and improve complex systems, including social, technical, and mechanical systems, and work with and maintain a variety of technologies. 10. All students will integrate employability skills into behaviors, which prepare one for obtaining, maintaining, advancing, and changing employment.	

Program Content Standards	National Standards for	Work Keys	Michigan Career and Employability Skills	Michigan Technology Content
	Program Area	Skills Level	Standards	Standards
10.2 411 4 1 4 311		Applied Mathematics:		
10.2 All students will		2	1. All students will apply basic communication skills	1. Use and transfer technological
demonstrate procedures applied		3	(reading, writing, speaking, and listening), apply	knowledge and skills for life roles (family
to safety, security, and		4	scientific and social studies concepts, perform	member, citizen, worker, consumer,
environmental issues.		5 6	mathematical processes, and apply technology in work-related situations.	lifelong learner)
		7	work-related situations.	2. Use technologies to input, retrieve,
		/	2. All students will acquire, organize, interpret, and	organize manipulate, evaluate, and
		Applied Technology	evaluate information from career awareness and	communicate information.
		Applied Technology	exploration activities, career assessment, and work-	communicate information.
		4	based experiences to identify and to pursue their	3. Apply appropriate technologies to
		5	career goals.	critical thinking, creative, expression, and
		6	career goals.	decision-making skills.
			3. All student will demonstrate the ability to combine	decision-making skins.
		Listening and Writing:	ideas or information in new ways, make connections	4. Employ a systematic approach to
		Listening	between seemingly unrelated ideas, and organize and	technological solutions by using resources
		1	present information in formats such as symbols,	and processes to create, maintain, and
		2	pictures, schematics, charts, and graphs.	improve products, systems, and
		$\frac{1}{3}$	F,,,,	environments
		4	4. All students will make decisions and solve	
		5	problems by specifying goals, identifying resources	5. Apply ethical and legal standards in
			and constraints, generating alternatives, considering	planning, using, and evaluating
		Locating Information	impact, choosing appropriate alternatives,	technology.
		3	implementing plans of action and evaluating results.	
		4		
		5	5. All students will display personal qualities such as	6. Evaluate the societal and
		6	responsibility, self-management, self-confidence,	environmental impacts of technology and
			ethical behavior, and respect for self and others.	forecast alternative uses and possible
				consequences to make informed civic,
		Observation	6. All students will identify organize, plan, and	social, and economic decisions.
		3	allocate resources (such as time, money, material, and	
		4	human resources) efficiently and effectively.	
		5		
		6	7. All students will work cooperatively with people of	
		D I C I C I	diverse backgrounds and abilities, identify with the	
		Reading for Information	group's goals and values, learn to exercise leadership,	
		3 4	tech others new skills, serve clients or customers, and will contribute to a group process with ideas,	
		5	suggestions, and efforts.	
		6	suggestions, and enorts.	
		7	8. All students will communicate ideas to support a	
		_ ′	position and negotiate to resolve divergent interests.	
		Teamwork	position and negotiate to resolve divergent interests.	
		3	9. All students will learn to understand, monitor, and	
		4	improve complex systems, including social, technical,	
		5	and mechanical systems, and work with and maintain	
		6	a variety of technologies.	

Program Content Standards	National Standards for	Work Keys	Michigan Career and Employability Skills	Michigan Technology Content
	Program Area	Skills Level	Standards	Standards
		Listening and Writing: Writing 1 2 3 4 5	10. All students will integrate employability skills into behaviors, which prepare one for obtaining, maintaining, advancing, and changing employment.	

Program Content Standards	National Standards for	Work Keys	Michigan Career and Employability Skills	Michigan Technology Content
	Program Area	Skills Level	Standards	Standards
		Applied Mathematics:		
10.3 All students will apply			1. All students will apply basic communication	 Use and transfer technological
concepts of service to meet		3	skills (reading, writing, speaking, and listening),	knowledge and skills for life roles (family
customer service expectations.		4	apply scientific and social studies concepts,	member, citizen, worker, consumer,
		5	perform mathematical processes, and apply	lifelong learner)
		6	technology in work-related situations.	
		7		2. Use technologies to input, retrieve,
			2. All students will acquire, organize, interpret,	organize manipulate, evaluate, and
		Applied Technology	and evaluate information from career awareness	communicate information.
		3	and exploration activities, career assessment, and	
		4	work-based experiences to identify and to pursue	3. Apply appropriate technologies to
		5	their career goals.	critical thinking, creative, expression, and
		6		decision-making skills.
			3. All student will demonstrate the ability to	
		Listening and Writing:	combine ideas or information in new ways, make	4. Employ a systematic approach to
		Listening	connections between seemingly unrelated ideas,	technological solutions by using resources
		1	and organize and present information in formats	and processes to create, maintain, and
		2	such as symbols, pictures, schematics, charts, and	improve products, systems, and
		3	graphs.	environments
		4 5	4 411	5 A
		3	4. All students will make decisions and solve	5. Apply ethical and legal standards in
		Locating Information	problems by specifying goals, identifying resources and constraints, generating alternatives,	planning, using, and evaluating technology.
		3	considering impact, choosing appropriate	technology.
		4	alternatives, implementing plans of action and	
		5	evaluating results.	6. Evaluate the societal and
		6	evaluating results.	environmental impacts of technology and
		· ·	5. All students will display personal qualities such	forecast alternative uses and possible
			as responsibility, self-management, self-	consequences to make informed civic,
		Observation	confidence, ethical behavior, and respect for self	social, and economic decisions.
		3	and others.	
		4	und official	
		5	6. All students will identify organize, plan, and	
		6	allocate resources (such as time, money, material,	
			and human resources) efficiently and effectively.	
		Reading for Information		
		3	7. All students will work cooperatively with people	
		4	of diverse backgrounds and abilities, identify with	
		5	the group's goals and values, learn to exercise	
		6	leadership, tech others new skills, serve clients or	
		7	customers, and will contribute to a group process	
			with ideas, suggestions, and efforts.	
		Teamwork		
		3	8. All students will communicate ideas to support	
		4	a position and negotiate to resolve divergent	
		5	interests.	
		6		

Program Content Standards	National Standards for	Work Keys	Michigan Career and Employability Skills	Michigan Technology Content
	Program Area	Skills Level	Standards	Standards
	riogiam Area	Listening and Writing: Writing 1 2 3 4 5	9. All students will learn to understand, monitor, and improve complex systems, including social, technical, and mechanical systems, and work with and maintain a variety of technologies. 10. All students will integrate employability skills into behaviors, which prepare one for obtaining, maintaining, advancing, and changing	Standards
			employment.	

Program Content Standards	National Standards for	Work Keys	Michigan Career and Employability Skills	Michigan Technology Content
	Program Area	Skills Level	Standards	Standards
		Applied Mathematics:		
10.4 All students will			1. All students will apply basic communication	Use and transfer technological
demonstrate practices and skills		3	skills (reading, writing, speaking, and listening),	knowledge and skills for life roles (family
involved in lodging occupations.		4	apply scientific and social studies concepts, perform	member, citizen, worker, consumer,
		5	mathematical processes, and apply technology in	lifelong learner)
		6	work-related situations.	
		7	2 411 4 1 4 211 1 1 1 1 1 1 1	2. Use technologies to input, retrieve,
		A 1: 17: 1 1	All students will acquire, organize, interpret, and evaluate information from career awareness and	organize manipulate, evaluate, and
		Applied Technology	evaluate information from career awareness and exploration activities, career assessment, and work-	communicate information.
		4	based experiences to identify and to pursue their	3. Apply appropriate technologies to
		5	career goals.	critical thinking, creative, expression, and
		6	career goars.	decision-making skills.
			3. All student will demonstrate the ability to	
		Listening and Writing:	combine ideas or information in new ways, make	4. Employ a systematic approach to
		Listening	connections between seemingly unrelated ideas, and	technological solutions by using resources
		1	organize and present information in formats such as	and processes to create, maintain, and
		2	symbols, pictures, schematics, charts, and graphs.	improve products, systems, and
		3		environments
		4 5	4. All students will make decisions and solve	5 A
		3	problems by specifying goals, identifying resources and constraints, generating alternatives, considering	5. Apply ethical and legal standards in planning, using, and evaluating
		Locating Information	impact, choosing appropriate alternatives,	technology.
		3	implementing plans of action and evaluating results.	technology.
		4	implementing plans of action and evaluating results.	
		5	5. All students will display personal qualities such	6. Evaluate the societal and
		6	as responsibility, self-management, self-confidence,	environmental impacts of technology and
			ethical behavior, and respect for self and others.	forecast alternative uses and possible
				consequences to make informed civic,
		Observation	6. All students will identify organize, plan, and	social, and economic decisions.
		3	allocate resources (such as time, money, material,	
		4 5	and human resources) efficiently and effectively.	
		6	7. All students will work cooperatively with people	
		o o	of diverse backgrounds and abilities, identify with	
		Reading for Information	the group's goals and values, learn to exercise	
		3	leadership, tech others new skills, serve clients or	
		4	customers, and will contribute to a group process	
		5	with ideas, suggestions, and efforts.	
		6		
		7	8. All students will communicate ideas to support a	
			position and negotiate to resolve divergent interests.	
		Teamwork		
		3	9. All students will learn to understand, monitor,	
		4	and improve complex systems, including social,	
		5	technical, and mechanical systems, and work with	
		6	and maintain a variety of technologies.	

Program Content Standards	National Standards for	Work Keys	Michigan Career and Employability Skills	Michigan Technology Content
	Program Area	Skills Level	Standards	Standards
		Listening and Writing: Writing 1 2 3 4 5	10. All students will integrate employability skills into behaviors, which prepare one for obtaining, maintaining, advancing, and changing employment.	

Program Content Standards	National Standards for	Work Keys	Michigan Career and Employability Skills	Michigan Technology Content
	Program Area	Skills Level	Standards	Standards
	3	Applied Mathematics:		
10.5 All students will			1. All students will apply basic communication	Use and transfer technological
demonstrate practices and skills		3	skills (reading, writing, speaking, and listening),	knowledge and skills for life roles (family
for travel related services.		4	apply scientific and social studies concepts, perform	member, citizen, worker, consumer,
		5	mathematical processes, and apply technology in	lifelong learner)
		6	work-related situations.	
		7		2. Use technologies to input, retrieve,
			2. All students will acquire, organize, interpret, and	organize manipulate, evaluate, and
		Applied Technology	evaluate information from career awareness and	communicate information.
		3	exploration activities, career assessment, and work-	
		4	based experiences to identify and to pursue their	3. Apply appropriate technologies to
		5	career goals.	critical thinking, creative, expression, and
		6	2 48 4 1 4 28 1 4 4 1274	decision-making skills.
		1377.77	3. All student will demonstrate the ability to	4.5.1
		Listening and Writing: Listening	combine ideas or information in new ways, make connections between seemingly unrelated ideas, and	4. Employ a systematic approach to technological solutions by using resources
		Listening	organize and present information in formats such as	and processes to create, maintain, and
		$\frac{1}{2}$	symbols, pictures, schematics, charts, and graphs.	improve products, systems, and
		$\frac{1}{3}$	symbols, pictures, schematics, charts, and graphs.	environments
		4	4. All students will make decisions and solve	Chvironments
		5	problems by specifying goals, identifying resources	5. Apply ethical and legal standards in
			and constraints, generating alternatives, considering	planning, using, and evaluating
		Locating Information	impact, choosing appropriate alternatives,	technology.
		3	implementing plans of action and evaluating results.	
		4		
		5	5. All students will display personal qualities such	6. Evaluate the societal and
		6	as responsibility, self-management, self-confidence,	environmental impacts of technology and
			ethical behavior, and respect for self and others.	forecast alternative uses and possible
				consequences to make informed civic,
		Observation	6. All students will identify organize, plan, and	social, and economic decisions.
		3	allocate resources (such as time, money, material,	
		4	and human resources) efficiently and effectively.	
		5	<u> </u>	
		6	7. All students will work cooperatively with people	
		D I C I C I	of diverse backgrounds and abilities, identify with	
		Reading for Information 3	the group's goals and values, learn to exercise leadership, tech others new skills, serve clients or	
		3 4		
1		5	customers, and will contribute to a group process with ideas, suggestions, and efforts.	
1		6	with facas, suggestions, and efforts.	
			8. All students will communicate ideas to support a	
		'	position and negotiate to resolve divergent interests.	
		Teamwork	position and negotiate to resolve divergent interests.	
		3	9. All students will learn to understand, monitor,	
1		4	and improve complex systems, including social,	
		5	technical, and mechanical systems, and work with	

Program Content Standards	National Standards for Program Area	Work Keys Skills Level	Michigan Career and Employability Skills Standards	Michigan Technology Content Standards
	Trogram Arca	6 Listening and Writing:	and maintain a variety of technologies. 10. All students will integrate employability skills	Stanuarus
		Writing 1 2	into behaviors, which prepare one for obtaining, maintaining, advancing, and changing employment.	
		3 4 5		

Program Content Standards	National Standards for	Work Keys	Michigan Career and Employability Skills	Michigan Technology Content
	Program Area	Skills Level	Standards	Standards
		Applied Mathematics:		
10.6 All students will			1. All students will apply basic communication	Use and transfer technological
demonstrate management of		3	skills (reading, writing, speaking, and listening),	knowledge and skills for life roles (family
recreation, leisure, and other		4	apply scientific and social studies concepts,	member, citizen, worker, consumer,
programs and events.		5	perform mathematical processes, and apply	lifelong learner)
		6	technology in work-related situations.	
		7		2. Use technologies to input, retrieve,
			2. All students will acquire, organize, interpret,	organize manipulate, evaluate, and
		Applied Technology	and evaluate information from career awareness	communicate information.
		3	and exploration activities, career assessment, and	
		4	work-based experiences to identify and to pursue	3. Apply appropriate technologies to
		5 6	their career goals.	critical thinking, creative, expression, and decision-making skills.
			3. All student will demonstrate the ability to	
		Listening and Writing:	combine ideas or information in new ways, make	4. Employ a systematic approach to
		Listening	connections between seemingly unrelated ideas,	technological solutions by using resources
		1	and organize and present information in formats	and processes to create, maintain, and
		2	such as symbols, pictures, schematics, charts, and	improve products, systems, and
		3	graphs.	environments
		4	4 41 4 1 4 71 1 1 1 1 1	6 4 1 4: 1 11 14 1 1:
		5	4. All students will make decisions and solve	5. Apply ethical and legal standards in
		Lagating Information	problems by specifying goals, identifying resources and constraints, generating alternatives,	planning, using, and evaluating technology.
		Locating Information 3	considering impact, choosing appropriate	technology.
		4	alternatives, implementing plans of action and	
		5	evaluating results.	6. Evaluate the societal and
		6	evaluating results.	environmental impacts of technology and
		, and the second	5. All students will display personal qualities such	forecast alternative uses and possible
			as responsibility, self-management, self-	consequences to make informed civic,
		Observation	confidence, ethical behavior, and respect for self	social, and economic decisions.
		3	and others.	,
		4		
		5	6. All students will identify organize, plan, and	
		6	allocate resources (such as time, money, material,	
			and human resources) efficiently and effectively.	
		Reading for Information		
		3	7. All students will work cooperatively with people	
		4	of diverse backgrounds and abilities, identify with	
		5	the group's goals and values, learn to exercise	
		6 7	leadership, tech others new skills, serve clients or	
		'	customers, and will contribute to a group process with ideas, suggestions, and efforts.	
		Teamwork	with fucas, suggestions, and efforts.	
		3	8. All students will communicate ideas to support	
		4	a position and negotiate to resolve divergent	
		5	interests.	
		6		

Program Content Standards	National Standards for	Work Keys	Michigan Career and Employability Skills	Michigan Technology Content
	Program Area	Skills Level	Standards	Standards
		Listening and Writing: Writing 1 2 3 4 5	9. All students will learn to understand, monitor, and improve complex systems, including social, technical, and mechanical systems, and work with and maintain a variety of technologies. 10. All students will integrate employability skills into behaviors, which prepare one for obtaining, maintaining, advancing, and changing employment.	

References: Some materials were reviewed by industry representatives and abstracted from sets of standards from the following organizations: the Dietary mangers Association, the American Dietics Association the National Restaurant Association- ProStart Program, the American Culinary Federation, the United States Food and Drug Administration, Center for Food Safety and Applied Nutrition, and the Career through Culinary Arts Program